

## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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14 May 1999 (14.05.99)

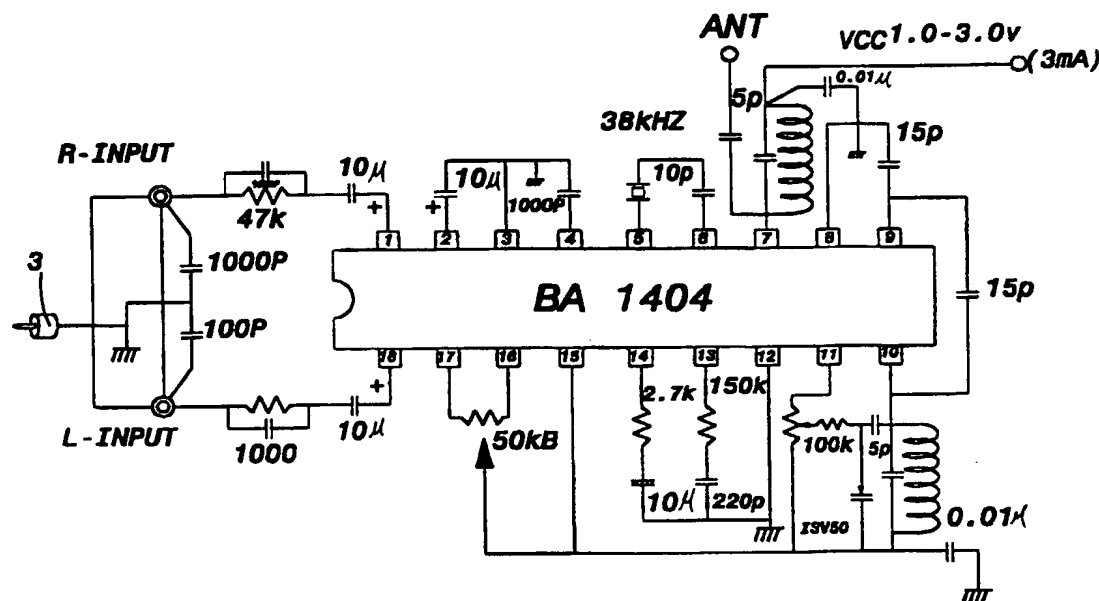
KR

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99-1, Nam Hyeon Dong San, Gwanak-Gu, Seoul 151-080  
(KR).(81) Designated States: AE, AL, AM, AU, AZ, BA, BB, BG, BR,  
BY, CA, CN, CR, CU, CZ, DM, EE, GD, GE, GH, GM,  
HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,  
LR, LS, LT, LV, MA, MD, MG, MK, MN, MW, MX, NO,  
NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, TZ,  
UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH,  
GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian  
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European  
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR,  
IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF,  
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published

With international search report.

(54) Title: ELECTRONIC DEVICES USING EARPHONES AND WIRELESS EARPHONES



(57) Abstract

In electronic device using earphones a conventional stereo transmitter using without antenna is connected and in a receiver capable of receiving without an antenna a small trimmer (1) for a variable condenser and a coupled resistances (2) for a variable resistor are connected to receive sound from electronic device by a wireless earphone.

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# **Electronic Devices using Earphones and Wireless Earphones.**

## **BACKGROUND OF THE INVENTION**

### **FIELD OF THE INVENTION**

The present invention relates to electronic devices using earphones such as audios, hand phones(Cellular phones), video phones, device for singing, game device, general telephones and internet phone and wireless earphones, more particularly, to electronic devices using earphones such as large audios for the rooms or portable small audios(cassettes) and wireless earphones.

### **DESCRIPTION OF THE PRIOR ART**

Generally in earphones for electronic devices using earphones such as large audios or small audios i.e cassettes wires having earphone plugs for connection with jack of the devices should be connected in order to hear sound from electronic devices.

Therefore in case of large audios for the room since the electric wire

should be long in order to connect with the devices placed far away there is very inconvenient to handle them and also in case for portable cassettes as small audios cassettes should be always connected by wire with earphones in order to hear sound from the cassettes.

### SUMMARY OF THE INVENTION

The present invention is to improve conventional earphones having electric wires for electronic devices. Furthermore the present invention is to provide electronic devices using earphones capable of hearing sound of electronic devices by wireless earphones and wireless earphones for the devices, so that sound of the electronic devices can be heard from the electronic devices by only earphones without wires.

### DESCRIPTION OF THE DRAWINGS

Fig 1 represents an example of circuits of transmitters being used in the present invention.

Fig 2 represents an example of circuits for receivers being used in the present invention.

### DETAILED DESCRIPTION OF THE INVENTION

Now referring to the accompanying drawings the present invention is described in detail as below.

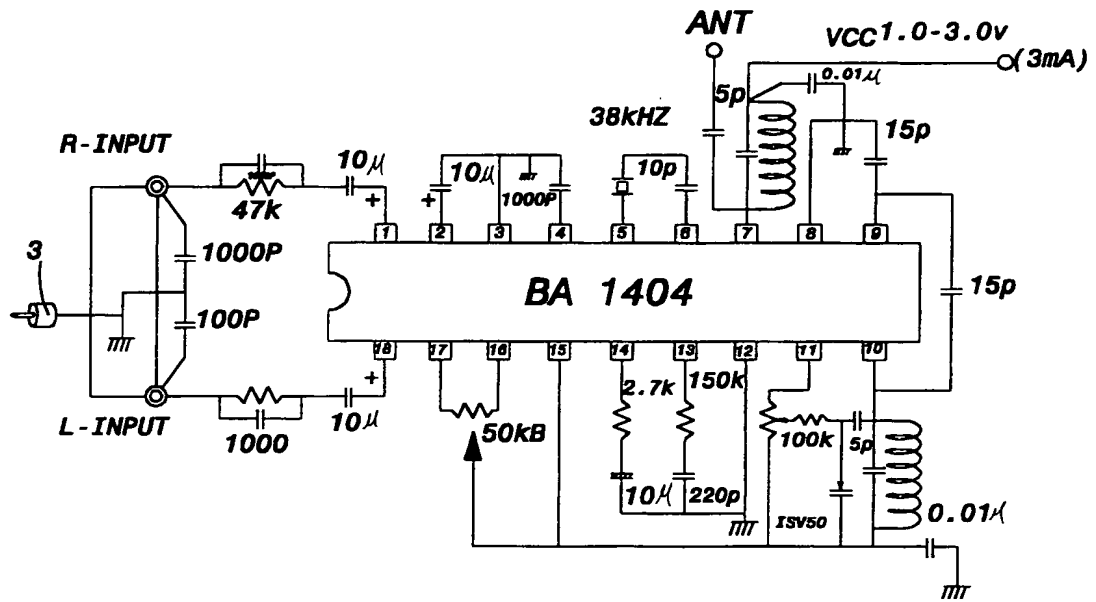
The present invention relates to electronic devices using earphones and wireles earphones characterized in installing, by plugs 3 or by conventional means, conventional small stereo transmitters T without antennas having circuit as shown in Fig 1 in electronic devices using earphones and in installing small trimmers 1 for variable condensers and coupled resistances 2 for variable resistor in conventional small receivers R of earphones capable of receiving without antennas having circuits as shown in Fig 2.

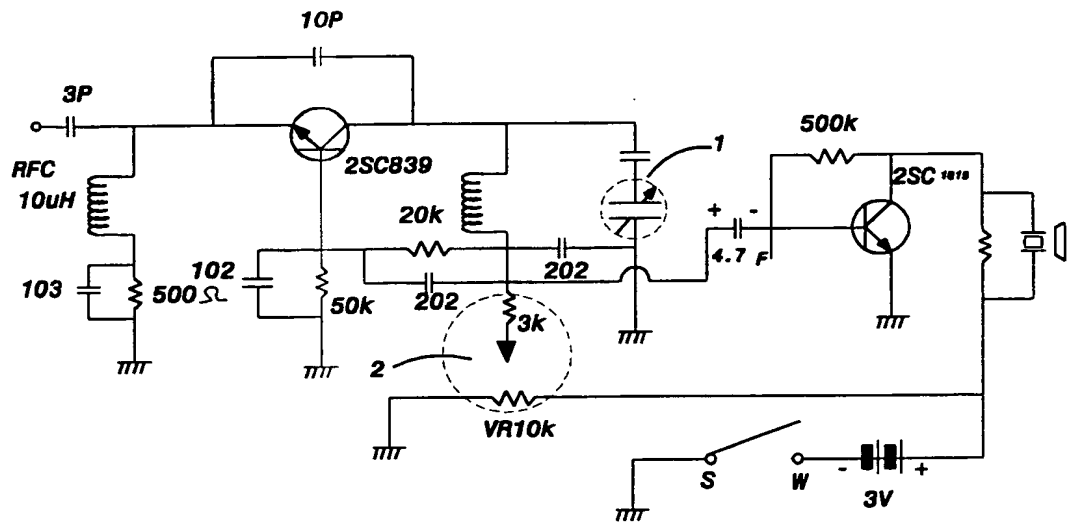
Upon the above-stated electronic devices using earphones and wireless earphones sound transmitting from the electronic devices can be heard by earphones without wires.

Accordingly although the electronic devices are placed far away from earphones each other indoors or outdoors sound from the electronic devices can be heard by wireless earphones clearly.

## CLAIMS

1. Electronic devices using earphones and wireless earphones characterized in installing, by plugs 3 or conventional means, conventional small stereos transmitters T without antennas in electronic devices using earphones and in installing small trimmers 1 for variable condensers and coupled resistances 2 for variable resistor in conventional small receiver R of earphones capable of receiving without antennas.

*Fig 1*

*Fig 2*



# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR 00/00263

## CLASSIFICATION OF SUBJECT MATTER

IPC<sup>7</sup>: H 04 R 3/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC<sup>7</sup>: H 04 R 1/00, 1/10, 3/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

H 04 R 5/00, 5/033, 25/00; H 04 B 1/38; G 11 B 27/00

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 98/26513 A (SIEMENS) 18 June 1998 (18.06.98)	1
A	EP 0817139 A2 (SUN MICROSYSTEMS) 7 January 1998 (07.01.98)	1
A	DE 29710730 U1 (MEGGY'S ROSE MANAGEMENT) 23 October 1997 (23.10.97)	1
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☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

\* Special categories of cited documents:

„A“ document defining the general state of the art which is not considered to be of particular relevance

„E“ earlier application or patent but published on or after the international filing date

„L“ document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

„O“ document referring to an oral disclosure, use, exhibition or other means

„P“ document published prior to the international filing date but later than the priority date claimed

„T“ later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

„X“ document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

„Y“ document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

„&“ document member of the same patent family

Date of the actual completion of the international search

26 May 2000 (26.05.2000)

Date of mailing of the international search report

31 July 2000 (31.07.2000)

Name and mailing address of the ISA/AT

Austrian Patent Office  
Kohlmarkt 8-10; A-1014 Vienna  
Facsimile No. 1/53424/535

Authorized officer

Grössing

Telephone No. 1/53424/386

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR 00/00263

All three documents retrieved exhibit electronic devices using wireless earphones.

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.  
**PCT/KR 00/00263**

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
WO	A1	9826513	18-06-1998	AU	A1	74002/98	03-07-1998
EP	A2	817139	07-01-1998	JP	A2	10232690	02-09-1998
EP	A3	817139	29-12-1999	US	A	5894119	13-04-1999
DE	U1	29710730	23-10-1997	none			

# PATENT COOPERATION TREATY

## PCT

REC'D 26 NOV 2002

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### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>OO/RJH/0325</b>	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. <b>PCT/KR 00/00263</b>	International filing date (day/month/year) <b>25 March 2000 (25.03.2000)</b>	Priority Date (day/month/year) <b>14 May 1999 (14.05.1999)</b>
International Patent Classification (IPC) or national classification and IPC  <b>IPC<sup>7</sup>: H04R 3/00</b>		
Applicant <b>RHE, JUNG HOON</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examination Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of   3   sheets, including this cover sheet.  
  
☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I.    ☒ Basis of the opinion
- II.   ☐ Priority
- III.   ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV.   ☐ Lack of unity of invention
- V.    ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI.   ☐ Certain documents cited
- VII.   ☐ Certain defects in the international application
- VIII. ☐ Certain observations on the international application

Date of submission of the demand  <b>17.07.2000</b>	Date of completion of this report  <b>4 November 2002 (04.11.2002)</b>
Name and mailing address of the IPEA/AT <b>Austrian Patent Office Kohlmarkt 8-10 A-1014 Vienna Facsimile No. 1/53424/200</b>	Authorized officer  <b>GRÖSSING G.</b>  Telephone No. 1/53424/386

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR 00/00263

**I. Basis of the report****1. With regard to the elements of the international application:\***

- ☒ the international application as originally filed
- ☐ the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☐ the claims:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement) under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☐ the drawings:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

**2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.**  
These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

**3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:**

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

**4. ☐ The amendments have resulted in the cancellation of:**

- ☐ the description, pages \_\_\_\_\_.
- ☐ the claims, Nos. \_\_\_\_\_.
- ☐ the drawings, sheets/fig \_\_\_\_\_.

**5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\***

*\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as „originally filed“ and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*

*\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/KR 00/00263**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement	Novelty (N)	Claims 1	YES
		Claims	NO
	Inventive step (IS)	Claims 1	YES
		Claims	NO
	Industrial applicability (IA)	Claims 1	YES
		Claims	NO

## Citations and explanations (Rule 70.7)

The following documents have been cited in the Search Report:

D1: WO 98/26513 A  
D2: EP 0817139 A2  
D3: DE 29710730 U1

None of the cited documents shows electronic devices using earphones and wireless earphones comprising the combination of small stereo transmitters and small trimmers for variable condensers and coupled resistances for variable resistors in small receivers, each without using antennas. Therefore, the object of the present application as characterized by claim 1 must be considered novel and inventive.  
Industrial applicability is given.

## PCT

### NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
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Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing: <div style="text-align: center;">23 November 2000 (23.11.00)</div>	Applicant's or agent's file reference: <div style="text-align: center;">OO/rjh/0325</div>
International application No.: <div style="text-align: center;">PCT/KR00/00263</div>	Priority date: <div style="text-align: center;">14 May 1999 (14.05.99)</div>
International filing date: <div style="text-align: center;">25 March 2000 (25.03.00)</div>	
Applicant: <div style="text-align: center;">RHE, Jung, Hoon</div>	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International preliminary Examining Authority on:  

17 July 2000 (17.07.00)

☐ in a notice effecting later election filed with the International Bureau on:  

\_\_\_\_\_

2. The election ☒ was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<p style="text-align: center;"><b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No.: (41-22) 740.14.35</p>	<p>Authorized officer:</p> <p style="text-align: center;">J. Zahra</p> <p>Telephone No.: (41-22) 338.83.38</p>
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## PCT

### NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

RHU, Kee Hyun  
South Blue International Patent  
Law Office  
Rm 201, Animedia Bldg,  
823-11, Yeok Sam-Dong  
Gang Nam-Gu  
135-080 Seoul  
RÉPUBLIQUE DE CORÉE

<b>Date of mailing (day/month/year)</b> 08 August 2001 (08.08.01)	
<b>Applicant's or agent's file reference</b> OO/rjh/0325	<b>IMPORTANT NOTIFICATION</b>
<b>International application No.</b> PCT/KR00/00263	<b>International filing date (day/month/year)</b> 25 March 2000 (25.03.00)

<b>1. The following indications appeared on record concerning:</b> <input type="checkbox"/> the applicant <input type="checkbox"/> the inventor <input checked="" type="checkbox"/> the agent <input type="checkbox"/> the common representative		
<b>Name and Address</b>  <div style="border: 1px solid black; height: 100px; width: 100%;"></div>	<b>State of Nationality</b>	<b>State of Residence</b>
	<b>Telephone No.</b>	
	<b>Facsimile No.</b>	
	<b>Teleprinter No.</b>	
<b>2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:</b> <input checked="" type="checkbox"/> the person <input type="checkbox"/> the name <input type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence		
<b>Name and Address</b> RHU, Kee Hyun South Blue International Patent Law Office Rm 201, Animedia Bldg, 823-11, Yeok Sam-Dong Gang Nam-Gu 135-080 Seoul Republic of Korea	<b>State of Nationality</b>	<b>State of Residence</b>
	<b>Telephone No.</b>	
	<b>Facsimile No.</b>	
	<b>Teleprinter No.</b>	
<b>3. Further observations, if necessary:</b>  <div style="border: 1px solid black; height: 40px; width: 100%;"></div>		
<b>4. A copy of this notification has been sent to:</b> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> the receiving Office  <input type="checkbox"/> the International Searching Authority  <input checked="" type="checkbox"/> the International Preliminary Examining Authority                         </div> <div> <input type="checkbox"/> the designated Offices concerned  <input checked="" type="checkbox"/> the elected Offices concerned  <input type="checkbox"/> other:                         </div> </div>		

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No.: (41-22) 740.14.35	<b>Authorized officer</b>  R. Raissi  Telephone No.: (41-22) 338.83.38
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# INTERNATIONAL SEARCH REPORT

International application No. No.  
PCT/KR 00/002633

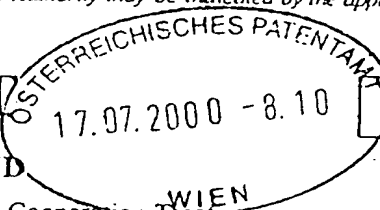
<b>CLASSIFICATION OF SUBJECT MATTER</b> IPC <sup>7</sup> : H 04 R 3/00 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) IPC <sup>7</sup> : H 04 R 1/00, 1/10, 3/00 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched H 04 R 5/00, 5/033, 25/00; H 04 B 1/38; G 11 B 27/00 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WPI		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 98/26513 A (SIEMENS) 18 June 1998 (18.06.98)	1
A	EP 0817139 A2 (SUN MICROSYSTEMS) 7 January 1998 (07.01.98)	1
A	DE 29710730 U1 (MEGGY'S ROSE MANAGEMENT) 23 October 1997 (23.10.97)	1
<div style="text-align: center;">----</div>		
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: „A“ document defining the general state of the art which is not considered to be of particular relevance „E“ earlier application or patent but published on or after the international filing date „L“ document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) „O“ document referring to an oral disclosure, use, exhibition or other means „P“ document published prior to the international filing date but later than the priority date claimed „T“ later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention „X“ document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone „Y“ document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art „&“ document member of the same patent family		
Date of the actual completion of the international search 26 May 2000 (26.05.2000)		Date of mailing of the international search report 31 July 2000 (31.07.2.2000)
Name and mailing address of the ISA/AT Austrian Patent Office Kohlmarkt 8-10; A-1014 Vienna Facsimile No. 1/53424/535		Authorized officer Grössing Telephone No. 1/53424/386

The demand must be filed directly with the competent International Preliminary Examining Authority or, if two or more Authorities are competent, with the one chosen by the applicant. The full name or two-letter code of that Authority may be indicated by the applicant on the line below:

IPEA/ AT

PCT

DEMAND



CHAPTER II

under Article 31 of the Patent Cooperation Treaty.  
The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty and hereby elects all eligible States (except where otherwise indicated).

For International Preliminary Examining Authority use only

AUSTRIAN PATENT OFFICE  
Identification of IPEA

17 July 2000 (17.07.00)  
Date of receipt of DEMAND

**Box No. I IDENTIFICATION OF THE INTERNATIONAL APPLICATION**

Applicant's or agent's file reference  
00/RJH/0325

International application No.  
PCT/KR00/00263

International filing date (day/month/year)  
25MARCH2000(25.03.2000)

(Earliest) Priority date (day/month/year)  
14 MAY 1999(14.05.1999)

Title of invention  
ELECTRONIC DEVICES USING EARPHONES AND WIRELESS  
EARPHONES

**Box No. II APPLICANT(S)**

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country)

RHE, JUNG HOON  
99-1, NAM HYEON DONG SAN, GWANAK-GU,  
SEOUL, 151-080  
REPUBLIC OF KOREA

Telephone No.:  
02-525-5657

Facsimile No.:  
02-525-2021

Teleprinter No.:

State (that is, country) of nationality:  
KR

State (that is, country) of residence:  
KR

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

State (that is, country) of nationality:

State (that is, country) of residence:

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

State (that is, country) of nationality:

State (that is, country) of residence:

☐ Further applicants are indicated on a continuation sheet.

## Box No. VI CHECK LIST

The demand is accompanied by the following elements, in the language referred to in Box No. IV, for the purposes of international preliminary examination:

- |  |   |        |
|--|---|--------|
| 1. translation of international application                              | : | sheets |
| 2. amendments under Article 34   | : | sheets |
| 3. copy (or, where required, translation) of amendments under Article 19 | : | sheets |
| 4. copy (or, where required, translation) of statement under Article 19  | : | sheets |
| 5. letter  | : | sheets |
| 6. other (specify)   | : | sheets |

For International Preliminary Examining Authority use only

received not received

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

The demand is also accompanied by the item(s) marked below:

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> fee calculation sheet                             | 4. <input type="checkbox"/> statement explaining lack of signature                                  |
| 2. <input type="checkbox"/> separate signed power of attorney                            | 5. <input type="checkbox"/> nucleotide and or amino acid sequence listing in computer readable form |
| 3. <input type="checkbox"/> copy of general power of attorney; reference number, if any: | 6. <input type="checkbox"/> other (specify):  |

## Box No. VII SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the demand).

RHE, JUNG HOON



For International Preliminary Examining Authority use only

- |  |   |
|--|---|
| 1. Date of actual receipt of DEMAND: 17 July 2000 (17.07.00)   |   |
| 2. Adjusted date of receipt of demand due to CORRECTIONS under Rule 60.1(b):   |   |
| 3. <input type="checkbox"/> The date of receipt of the demand is AFTER the expiration of 19 months from the priority date and item 4 or 5, below, does not apply.                        | <input type="checkbox"/> The applicant has been informed accordingly. |
| 4. <input type="checkbox"/> The date of receipt of the demand is WITHIN the period of 19 months from the priority date as extended by virtue of Rule 80.5.                               |   |
| 5. <input type="checkbox"/> Although the date of receipt of the demand is after the expiration of 19 months from the priority date, the delay in arrival is EXCUSED pursuant to Rule 82. |   |

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Demand received from IPEA on:

**Box No. III AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**

The following person is ☐ agent ☐ common representative  
 and ☐ has been appointed earlier and represents the applicant(s) also for international preliminary examination.  
☐ is hereby appointed and any earlier appointment of (an) agent(s)/common representative is hereby revoked.  
☐ is hereby appointed, specifically for the procedure before the International Preliminary Examining Authority, in addition to the agent(s)/common representative appointed earlier.

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

KIM, SEONG KYUN  
 108-202, DONG WON-APARTMENT, 1878-5  
 JEONG WANG-DONG, SIHEUNG-SI,  
 GYEONG GI-DO, 429-450  
 REPUBLIC OF KOREA

Telephone No.:

02-552-5430

Facsimile No.:

02-569-6459

Teleprinter No.:

☒ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

**Box No. IV BASIS FOR INTERNATIONAL PRELIMINARY EXAMINATION****Statement concerning amendments:\***

1. The applicant wishes the international preliminary examination to start on the basis of:

☒ the international application as originally filed

the description ☒ as originally filed  
☐ as amended under Article 34

the claims ☒ as originally filed  
☐ as amended under Article 19 (together with any accompanying statement)  
☐ as amended under Article 34

the drawings ☒ as originally filed  
☐ as amended under Article 34

2. ☐ The applicant wishes any amendment to the claims under Article 19 to be considered as reversed.

3. ☐ The applicant wishes the start of the international preliminary examination to be postponed until the expiration of 20 months from the priority date unless the International Preliminary Examining Authority receives a copy of any amendments made under Article 19 or a notice from the applicant that he does not wish to make such amendments (Rule 69.1(d)). *(This check-box may be marked only where the time limit under Article 19 has not yet expired.)*

\* Where no check-box is marked, international preliminary examination will start on the basis of the international application as originally filed or, where a copy of amendments to the claims under Article 19 and/or amendments of the international application under Article 34 are received by the International Preliminary Examining Authority before it has begun to draw up a written opinion or the international preliminary examination report, as so amended.

Language for the purposes of international preliminary examination: ENGLISH

☒ which is the language in which the international application was filed.

☐ which is the language of a translation furnished for the purposes of international search.

☐ which is the language of publication of the international application.

☐ which is the language of the translation (to be) furnished for the purposes of international preliminary examination.

**Box No. V ELECTION OF STATES**

The applicant hereby elects all eligible States (that is, all States which have been designated and which are bound by Chapter II of the PCT)

excluding the following States which the applicant wishes not to elect:

# PCT

## REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum) 00/RJH/0325

### Box No. I TITLE OF INVENTION

ELECTRONIC DEVICES USING EARPHONES AND WIRELESS EARPHONES

### Box No. II APPLICANT

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

RHE JUNG HOON  
99-1, NAM HYEON DONG SAN,  
GWANAK-GU, SEOUL, 151-080,  
REPUBLIC OF KOREA

☒ This person is also inventor.

Telephone No.  
02-525-5657

Facsimile No.

Teleprinter No.

State (that is, country) of nationality:

KR

State (that is, country) of residence:

KR

This person is applicant for the purposes of:



all designated States



all designated States except the United States of America



the United States of America only



the States indicated in the Supplemental Box

### Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

This person is:

☐ applicant only

☐ applicant and inventor

☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant for the purposes of:



all designated States



all designated States except the United States of America



the United States of America only



the States indicated in the Supplemental Box

☐ Further applicants and/or (further) inventors are indicated on a continuation sheet.

### Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:

☐ agent

☐ common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

KIM SEONG KYUN  
108-202, DONG WON APARTMENT, 1878-5,  
JEONG WANG-DONG, SIHEUNG-SI,  
GYEONG GI-DO, 429-450  
REPUBLIC OF KOREA

Telephone No.

02-552-5430

Facsimile No.

02-569-6459

Teleprinter No.

☒ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Box No.V DESIGNATION OF STATES

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):

Regional Patent

- ☒ AP ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SL Sierra Leone, SZ Swaziland, TZ United Republic of Tanzania, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☒ EA Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ EP European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☒ OA OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line)


National Patent (if other kind of protection or treatment desired, specify on dotted line):

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> AE United Arab Emirates                  | <input checked="" type="checkbox"/> LR Liberia                                   |
| <input checked="" type="checkbox"/> AL Albania                               | <input checked="" type="checkbox"/> LS Lesotho                                   |
| <input checked="" type="checkbox"/> AM Armenia                               | <input checked="" type="checkbox"/> LT Lithuania                                 |
| <input type="checkbox"/> AT Austria  | <input type="checkbox"/> LU Luxembourg   |
| <input checked="" type="checkbox"/> AU Australia                             | <input checked="" type="checkbox"/> LV Latvia                                    |
| <input checked="" type="checkbox"/> AZ Azerbaijan                            | <input checked="" type="checkbox"/> MA Morocco                                   |
| <input checked="" type="checkbox"/> BA Bosnia and Herzegovina                | <input checked="" type="checkbox"/> MD Republic of Moldova                       |
| <input checked="" type="checkbox"/> BB Barbados                              | <input checked="" type="checkbox"/> MG Madagascar                                |
| <input checked="" type="checkbox"/> BG Bulgaria                              | <input checked="" type="checkbox"/> MK The former Yugoslav Republic of Macedonia |
| <input checked="" type="checkbox"/> BR Brazil                                | <input checked="" type="checkbox"/> MN Mongolia                                  |
| <input checked="" type="checkbox"/> BY Belarus                               | <input checked="" type="checkbox"/> MW Malawi                                    |
| <input checked="" type="checkbox"/> CA Canada                                | <input checked="" type="checkbox"/> MX Mexico                                    |
| <input type="checkbox"/> CH and LI Switzerland and Liechtenstein             | <input checked="" type="checkbox"/> NO Norway                                    |
| <input checked="" type="checkbox"/> CN China                                 | <input checked="" type="checkbox"/> NZ New Zealand                               |
| <input checked="" type="checkbox"/> CR Costa Rica                            | <input checked="" type="checkbox"/> PL Poland                                    |
| <input checked="" type="checkbox"/> CU Cuba                                  | <input type="checkbox"/> PT Portugal   |
| <input checked="" type="checkbox"/> CZ Czech Republic                        | <input checked="" type="checkbox"/> RO Romania                                   |
| <input type="checkbox"/> DE Germany  | <input checked="" type="checkbox"/> RU Russian Federation                        |
| <input type="checkbox"/> DK Denmark  | <input checked="" type="checkbox"/> SD Sudan                                     |
| <input checked="" type="checkbox"/> DM Dominica                              | <input type="checkbox"/> SE Sweden   |
| <input checked="" type="checkbox"/> EE Estonia                               | <input checked="" type="checkbox"/> SG Singapore                                 |
| <input type="checkbox"/> ES Spain  | <input checked="" type="checkbox"/> SI Slovenia                                  |
| <input type="checkbox"/> FI Finland  | <input checked="" type="checkbox"/> SK Slovakia                                  |
| <input type="checkbox"/> GB United Kingdom                                   | <input checked="" type="checkbox"/> SL Sierra Leone                              |
| <input checked="" type="checkbox"/> GD Grenada                               | <input checked="" type="checkbox"/> TJ Tajikistan                                |
| <input checked="" type="checkbox"/> GE Georgia                               | <input checked="" type="checkbox"/> TM Turkmenistan                              |
| <input checked="" type="checkbox"/> GH Ghana                                 | <input checked="" type="checkbox"/> TR Turkey                                    |
| <input checked="" type="checkbox"/> GM Gambia                                | <input checked="" type="checkbox"/> TT Trinidad and Tobago                       |
| <input checked="" type="checkbox"/> HR Croatia                               | <input checked="" type="checkbox"/> TZ United Republic of Tanzania               |
| <input checked="" type="checkbox"/> HU Hungary                               | <input checked="" type="checkbox"/> UA Ukraine                                   |
| <input checked="" type="checkbox"/> ID Indonesia                             | <input checked="" type="checkbox"/> UG Uganda                                    |
| <input checked="" type="checkbox"/> IL Israel                                | <input checked="" type="checkbox"/> US United States of America                  |
| <input checked="" type="checkbox"/> IN India                                 | <input checked="" type="checkbox"/> UZ Uzbekistan                                |
| <input checked="" type="checkbox"/> IS Iceland                               | <input checked="" type="checkbox"/> VN Viet Nam                                  |
| <input checked="" type="checkbox"/> JP Japan                                 | <input checked="" type="checkbox"/> YU Yugoslavia                                |
| <input checked="" type="checkbox"/> KE Kenya                                 | <input checked="" type="checkbox"/> ZA South Africa                              |
| <input checked="" type="checkbox"/> KG Kyrgyzstan                            | <input checked="" type="checkbox"/> ZW Zimbabwe                                  |
| <input checked="" type="checkbox"/> KP Democratic People's Republic of Korea |  |
| <input checked="" type="checkbox"/> KR Republic of Korea                     |  |
| <input checked="" type="checkbox"/> KZ Kazakhstan                            |  |
| <input checked="" type="checkbox"/> LC Saint Lucia                           |  |
| <input checked="" type="checkbox"/> LK Sri Lanka                             |  |

Check-boxes reserved for designating States which have become party to the PCT after issuance of this sheet:

- ☐   
 ☐

**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation (including fees) must reach the receiving Office within the 15-month time limit.)

<b>Box No. VI PRIORITY CLAIM</b>		<input type="checkbox"/> Further priority claims are indicated in the Supplemental Box.		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: regional Office	international application: receiving Office
item (1) 14 MAY 1999 (14,05,1999)	PATENT 1999-17459	KR		
item (2)				
item (3)				
<input type="checkbox"/> The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s):				
<i>* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(h)(ii)). See Supplemental Box.</i>				
<b>Box No. VII INTERNATIONAL SEARCHING AUTHORITY</b>				
Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):		Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):		
ISA / AT		Date (day/month/year)	Number	Country (or regional Office)
<b>Box No. VIII CHECK LIST; LANGUAGE OF FILING</b>				
This international application contains the following number of sheets: request : 3 description (excluding sequence listing part) : 3 claims : 1 abstract : 1 drawings : 2 sequence listing part of description : Total number of sheets : 10		This international application is accompanied by the item(s) marked below: 1. <input checked="" type="checkbox"/> fee calculation sheet 2. <input type="checkbox"/> separate signed power of attorney 3. <input type="checkbox"/> copy of general power of attorney; reference number, if any: 4. <input type="checkbox"/> statement explaining lack of signature 5. <input type="checkbox"/> priority document(s) identified in Box No. VI as item(s): 6. <input type="checkbox"/> translation of international application into (language): 7. <input type="checkbox"/> separate indications concerning deposited microorganism or other biological material 8. <input type="checkbox"/> nucleotide and/or amino acid sequence listing in computer readable form 9. <input type="checkbox"/> other (specify):		
Figure of the drawings which should accompany the abstract: FIG 1		Language of filing of the international application: ENGLISH		
<b>Box No. IX SIGNATURE OF APPLICANT OR AGENT</b>				
Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).				
RHE JUNG HOON 				

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1. Date of actual receipt of the purported international application: 3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application: 4. Date of timely receipt of the required corrections under PCT Article 11(2): 5. International Searching Authority (if two or more are competent): ISA /	2. Drawings: <input type="checkbox"/> received: <input type="checkbox"/> not received: 6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid.

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Date of receipt of the record copy by the International Bureau: